

# GLOBAL SUPPLY CHAIN MANAGEMENT PROGRAM

## Global Supply Chain Management Concentration

The ability to manage complex global supply chains is key to success in the modern economy. Supply chain management involves coordinating and improving the flow and transformation of goods, services, information, and funds within companies and around the world, from raw materials to the final end user. The Global Supply Chain Management Concentration is designed to provide students with an in-depth knowledge of supply chain management (SCM) as an integrative value-creating strategy for complex business-to-business networks designed to enhance global competitiveness. Students will learn a process approach to integrating the key functions of marketing, logistics, operations management, computer information systems, accounting, and finance. Our interdisciplinary course of study transcends traditional business functionality and explores relationships that create value for multiple stakeholders across functions, organizations, and nations. The GSCM concentration uses a hands-on approach to expose students to a wide variety of career opportunities available in the field of supply chain management.

Students with a concentration in Global Supply Chain Management (GSCM) will be able to:

- Understand from a macro perspective how supply chain management relates to the global economy, industry competitiveness, and future challenges.
- Identify and manage supply chain dynamics and their influence on the relationships and resources within and across companies in a global supply chain environment
- Apply supply chain management concepts to improve both top-line (revenue) and bottom-line (profit) performance.
- Utilize data analytics to quantitatively inform supply chain strategies such as global transportation and network planning, inventory decision making, and facility location planning.
- Design, measure, and respond to key supply chain performance metrics
- Measure and assess the tradeoffs and interdependencies associated with strategic and tactical decisions regarding purchasing, materials handling, warehousing, packaging, and inventory management, with a focus on information as a substitute for inventory.
- Use supply chain technology to demonstrate how information is identified, acquired, organized, and analyzed to support critical strategic and operational management decisions in a global business environment.
- Put supply chain theory into practice through the use of hands-on simulations, exercises and problems, case studies, and consulting projects with real companies.
- Demonstrate effective oral and written business presentations of global supply chain management issues and solutions.

To obtain a concentration in GSCM, students must earn 18 credits with a minimum GPA of 2.0.

## Global Supply Chain Management Minor

The ability to manage complex global supply chains is key to success in the modern economy. Supply chain management involves coordinating and improving the flow and transformation of goods, services, information, and funds within companies and around the world, from raw materials to the final end user. The Global Supply Chain Management (GSCM) minor is designed to provide students with a working knowledge of supply chain management as an integrative value creating strategy for complex business-to-business networks designed to enhance global competitiveness. Students will learn a process approach to integrating the key functions of marketing, logistics, operations management, computer information systems, accounting, and finance. Our interdisciplinary course of study transcends traditional business functionality and explores relationships that create value for multiple stakeholders across functions, organizations, and nations. The GSCM minor uses a hands-on approach to expose students to a wide variety of career opportunities available in the field of supply chain management.

### Faculty

#### Professor

Christopher Roethlein  
Professor, Management; Coordinator of Global Supply Chain Management Program

#### Professor

Suhong Li  
Professor, Information Systems and Analytics

#### Professor

John Visich  
Professor, Management

#### Professor

Saeed Roohani  
Professor, Accounting

#### Associate Professor

Michael Gravier  
Associate Professor, Marketing

#### Associate Professor

Teresa McCarthy  
Associate Professor, Marketing

#### Associate Professor

Andres Ramirez  
Associate Professor, Finance

## Concentration

- Global Supply Chain Management Concentration

## Minor

- Global Supply Chain Management Minor

## Courses

### **GSCM 301. Supply Chain Management Concepts. 3 Credit Hours.**

This course will introduce students to supply chain management concepts that are critical to business success in today's fiercely competitive environment. Global supply chain management involves coordinating and improving the flow and transformation of goods, services, information, and funds within companies and around the world, from raw materials to the final end user. This course integrates key functions of operations management, marketing, logistics, and computer information systems in order to analyze and design domestic and international supply chains. Topics will include relationship management, transportation and distribution, inventory control, purchasing, forecasting, production management, and the impact of technology on supply chain management.

Prerequisites: MGT 201 or MGT 201G

Session Cycle: Fall

Yearly Cycle: Varies.

### **GSCM 310. Supply Chain Integration. 3 Credit Hours.**

This course is designed to help students synthesize concepts covered in other supply chain, marketing, operations management, accounting, and finance courses by providing an integrative framework for supply chain management decision-making in a global business setting. Students will learn how a business builds relationships and integrates demand and supply activities across the supply chain to efficiently and effectively deliver customer value. The hands-on learning will take place within a global supply chain management simulation where students assume the roles of suppliers and customers and work together to accomplish organizational and supply chain goals while competing with other supply chains. Topics include: market research, segmentation, customer value, new product development, relationship management, negotiation, production planning, distribution, accounting and financial planning.

Pre/Corequisites: ACG 203 and sophomore standing

Session Cycle: Fall

Yearly Cycle: Annual.

### **GSCM 320. Information Technology in Supply Chain Management. 3 Credit Hours.**

The purpose of this course is to discuss how IT is used to enable supply chain management and to improve the performance of the supply chain. Major topics include the role of IT in the supply chain, enterprise resource planning (ERP), innovative technologies in the supply chain, IT enablers for supply chain performance, and internet based supply chain and supply chain security. Hands-on exercises in a simulated SAP ERP system and real-world cases will be used in helping students understand course concepts. This course is cross-listed with ISA 320.

Prerequisites: ISA 201 and MGT 201 or MGT 201G

Session Cycle: Spring

Yearly Cycle: Annual.

### **GSCM 330. Basic Modeling and Analysis of Global Supply Chains. 3 Credit Hours.**

This course will provide students with basic quantitative problem solving tools in logistics and global supply chain management. Students will learn how to diagnose and solve problems in networks of transportation, warehouse, inventory, and operations facilities, including facility location, material flows, vehicle routing, and general analytical decision-making. Upon completion, students should be comfortable using modeling tools fundamental to logistics and global supply chain management, with a focus on linear programming, integer programming, non-linear programming, and simulation. The course emphasizes use of spreadsheet programs as these are ubiquitous in business. No prior experience in spreadsheets or advanced mathematics/statistics is required. Students will have to demonstrate practical application of analytical and decision-making techniques, including professional presentation skills.

Prerequisites: ISA 201

Session Cycle: Fall, Spring

Yearly Cycle: Annual.

### **GSCM 350. Financing the Global Supply Chain. 3 Credit Hours.**

In this survey course students are introduced to the management of funds that flow behind goods and services traded around the world. Students will examine the tools, challenges, developments and opportunities of the field. In 1973 world merchandise exports were a mere \$579 billion, by 2010 the figure was almost \$15 trillion while by 2015 it had jumped to \$19 trillion. The advent of globalization and the economic development of emerging countries have created nothing short of a revolution in the physical supply chain. A similar change has taken place in the financing side. Students will learn about commodity hedging, letters of credit, open accounts, export insurance and factoring; as well as understanding how working capital management affects the GSC.

Prerequisites: FIN 201 or FIN 201G and MGT 201 or MGT 201G

Session Cycle: Fall

Yearly Cycle: Varies.

### **GSCM 391. Supply Chain Management Internship. 3 Credit Hours.**

Individually supervised employment in an area of supply chain management involving the application of SCM theory and principles to the work environment. Students are required to work a minimum of ten hours per week on the job, meet periodically with their supervising faculty member, research related literature and prepare a substantive report on their work experience. The substantive report must contain content from the structured GSCM elective course it is replacing.

Prerequisites: GSCM 301 and junior standing.

### **GSCM 410. International Trade Logistics and Transportation. 3 Credit Hours.**

This course provides basic preparation in transportation economics and management as well as international transport and logistics. The course is taught in two modules: International Transport and Logistics, and Logistics Analysis. Attention is given to how transportation pricing and tradeoffs work, shipper and carrier strategies, and logistics processes for moving goods and people internationally. Students will quantitatively develop and assess strategies for transportation and network planning, inventory decision making, facility location planning, and vehicle routing.

Prerequisites: MGT 201 or MGT 201G and junior standing

Session Cycle: Spring

Yearly Cycle: Annual.

**GSCM 420. Process Analysis and Improvement. 3 Credit Hours.**

Process Analysis and Improvement will introduce the student to a variety of decision making methods and tools that can be used to solve operational problems and facilitate strategic decision making. Process analysis and improvement methods covered include Six Sigma, Lean and A3 for Healthcare. Students completing this course will have a high level of Excel application knowledge and proficiency with Visio. The methods and tools used in this course are applicable to all types of organizations and supply chains.

Prerequisites: MGT 201 or MGT 201G and junior standing

Session Cycle: Fall

Yearly Cycle: Annual.

**GSCM 430. Global Sourcing and Supply Management. 3 Credit Hours.**

Firms are increasingly developing sourcing and supply management as a source of global competitive advantage. As firms increasingly outsource manufacturing, the need for a strategic approach to global sourcing becomes more evident. The creation of value often requires careful coordination of activities across the boundaries of organizations, creating strategic alliances with suppliers, and viewing suppliers as an extension of the buying company. Students in this course will be provided with the fundamental tools and techniques to deliver value through supplier identification and selection, buying, negotiation and contracting, and supplier measurement and improvement. Through course readings and case analysis, students will learn how leading companies leverage sourcing and supply management to increase customer and shareholder value. Socially responsible procurement will be a focus of this course.

Prerequisites: GSCM 301 or GSCM 310 or GSCM 320 and senior standing

Session Cycle: Fall, Spring

Yearly Cycle: Annual.

**GSCM 440. Corporate Social Responsibility in the Global Supply Chain. 3 Credit Hours.**

The focus of this course is on corporate social responsibility from the perspective of the global supply chain. A wide array of topics will be covered including social and environmental reporting frameworks, risk management, supply chain ethics, sustainable business operations, closed-loop supply chains, LEED (Leadership in Energy and Environmental Design), disaster management and humanitarian supply chains, and corporate social responsibility standards, indices, rankings, and other performance measurements.

Prerequisites: MGT 201 or MGT 201G and junior standing

Session Cycle: Fall

Yearly Cycle: Annual.

**GSCM 490. Empirical Applications in Supply Chain Management. 3 Credit Hours.**

Supply chains exist whether or not they are managed. This capstone course will involve students in a study of best practices in managing global supply chains. A semester long, hands-on team based project with a global supply chain provider/industry member will allow students to demonstrate their skill sets and contribute to corporate success. Students will gain invaluable experience and become confident with their global supply chain knowledge and its applications, and participating supply chain providers/industry members will benefit through project efforts. Topics include: customer relationships, strategic sourcing, supplier relationships, logistics, strategic relationships, collaboration, performance measurements, alignment of goals, customer value, production planning, distribution, and financial planning.

Prerequisites: Two GSCM courses and senior standing

Session Cycle: Fall, Spring

Yearly Cycle: Annual.

**GSCM 497. Directed Study in Supply Chain Management. 3 Credit Hours.**

In-depth exploration of specialized areas of supply chain management serve as the purpose of this course. Individualized instruction is used to research areas in which the faculty member and student have a common interest. Extensive research including primary data collection may be required. The course concludes with the preparation of a thorough research report and presentation which must contain content from the structured GSCM elective courses it is replacing.

Prerequisites: GSCM 301 and senior standing.

**GSCM ST400. Special Topics in GSCM Strategic Decision Making in Supply Chain Management. 3 Credit Hours.**

The purpose of this course is to provide an in-depth understanding of how strategic management principals apply to the supply chain management discipline. Students will be introduced to state-of-the-art concepts, models and solution methods that are important to the design and management of supply chains. The discussion covers advanced topics with an emphasis on a format that makes the content accessible to students who aim to broaden and deepen their knowledge of supply chains. Specifically, topics such as smart pricing, SC performance measurement and coordinated product and supply chain design are highly relevant to those who seek an advanced career as a supply chain professional.

Prerequisites: Senior standing.